



XML Schema for E-Resource Licenses

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Talk Outline

1. Background: the DLF E-Resource Management Initiative
2. XML and License Information
3. Issues and Next Steps
4. Questions and Comments



1. The DLF Electronic Resource Management Initiative

ERMI Goals

- Describe architectures needed to manage large collections of licensed e-resources
- Establish lists of elements and definitions
- Write and publish XML Schemas/DTD's
- Promote best practices and standards for data interchange

<http://www.diglib.org/standards/dlf-erm02.htm>

ERMI Project “Deliverables” (google “web hub”) or

<http://www.library.cornell.edu/cts/elicensestudy/home.html>

- ✓ Problem Definition/Road Map
- ✓ Functional Specifications
- ✓ Workflow Diagram
- ✓ Entity Relationship Diagram
- ✓ Data Elements and Definitions
- ➡ XML Schema

Recent ERMI Developments

- ILS Vendor Responses
 - Innovative (“III”): beta testing begun
 - ExLibris: Development plan: Dec. '04
 - VTLS: Development plan, product name
 - Dynix: Draft “white paper”
- Consortial support issue
- CONSER Summit
 - Publisher interest in standard description of “public” versions of licenses
 - “Test bed” for shared resource/license records?



2. XML and License Information

XML Investigation Sub-group

- Adam Chandler (Cornell, Chair)
- Miriam Blake (Los Alamos National Laboratory)
- Sharon Farb (UCLA)
- Nancy Hoebelheinrich (Stanford)
- Angela Riggio (UCLA)
- Nathan Robertson (Johns Hopkins)
- Simon St. Laurent (O'Reilly & Associates)
- Robin Wendler (Harvard)

special thanks to:

- Renato Iannella (developer of ODRL)
- Susanne Guth (Wirtschaftsuniversität Wien)

Why License Focus?

- Originally considered a schema for the entire data dictionary, but . . .
 - Significant overlap with existing and *emerging* schemas.
 - Limited functionality.
- Why licensing?
 - Area of considerable concern and current interest.
 - Significant commercial activity in defining and schematizing.
 - Limited library activity in defining and schematizing.

Uses for License Data Exchange

- Licensing elements actionable in an ERM system
 - Convey appropriate license restrictions.
 - Show or hide resources depending on availability to certain groups.
 - Prompt staff for action
- Exchange with consortial partners
- License feeds from vendors

ERMI Standards Comparison

	ID/ Descrip.	Acq	License/ Rights	Access/ Trouble	Usage Stats	Preser- vation	Authent- ication	Open
ERMI Focus								
Dublin Core								
A-Core								
ONIX								
ONIX for Serials								
<indecs>								
METS								
COUNTER								
Shibboleth								
ODRL								
XrML								

Existing License/Rights Efforts

- ~~ONIX for Serials~~
 - Rights are part of scope, but planned for later development.
- ~~<indecs>~~
 - “metadata framework.” Insufficiently precise.
- ~~METS~~
 - Has developed a draft “simple rights schema” while more comprehensive RELs (XrML, ODRL) are being developed and debated.
- ODRL
- XrML

ODRL vs. XrML

ODRL

“does not determine . . . requirements of any trusted services . . . that utilize its language.”

“does not enforce or mandate any policies for DRM.”

“has no license requirements and is available in the spirit of ‘open source’ software.”

XrML

“licenses can be interpreted and enforced by the consumption application.”

“How will the industry benefit from XrML? Enables the creation of new revenue streams based on the ability to control the use and access of digital content and services”

“a portfolio of patented technologies. . . . if you use XrML in a context covered by the ContentGuard patents, then there may be a fee.”

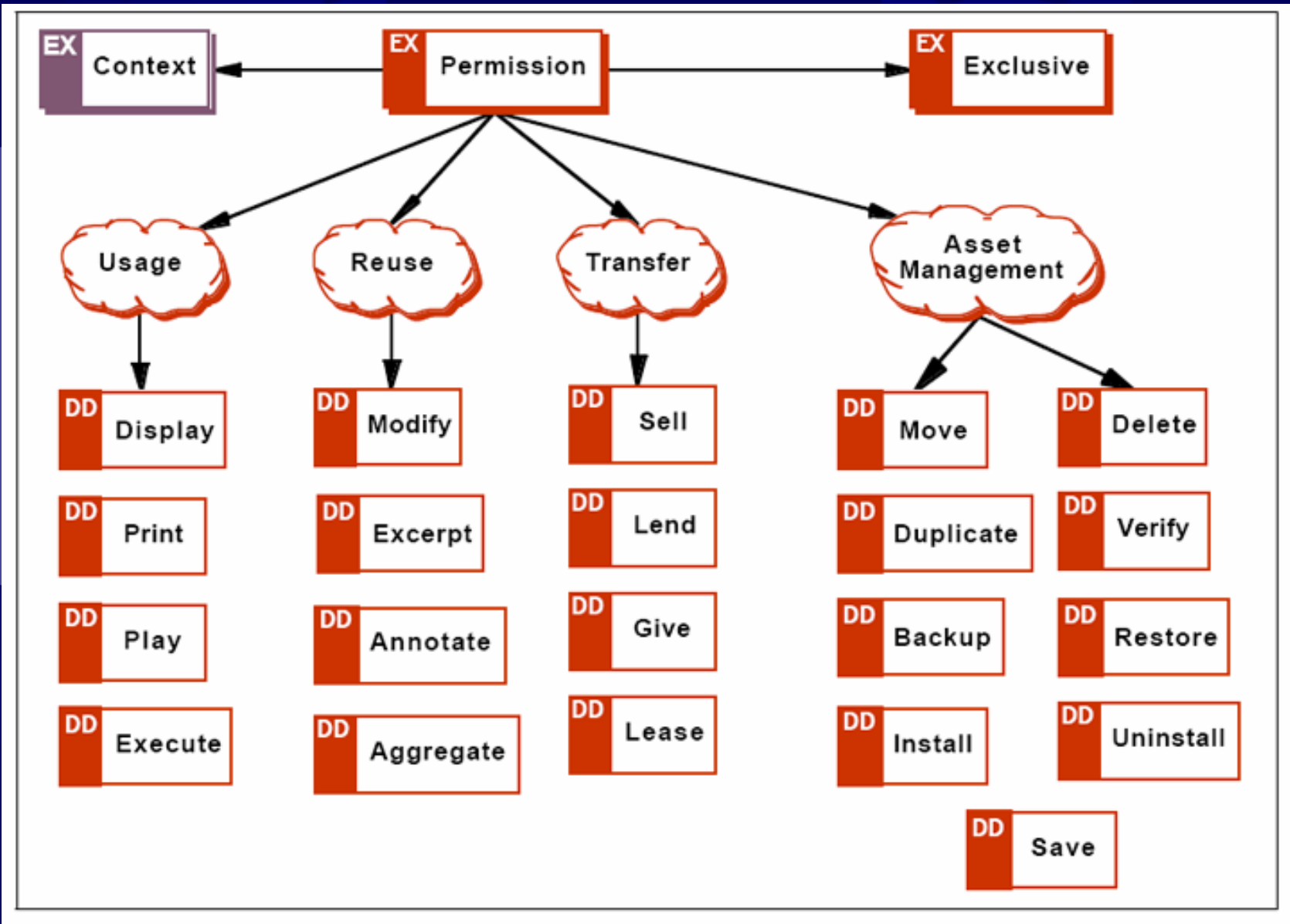
“License/Rights”

- License (ERMI): “Information from the legal document, a contractual agreement, that defines the relationship between the grantor and the licensee and the terms and conditions of use for the product.”
- Rights (ODRL): “Rights include Permissions, which can then contain Constraints, Requirements, and Conditions. Permissions are the actual usages or activities allowed.... Constraints are limits to these permissions.... Requirements are the obligations needed to exercise the Permission.... Conditions specify exceptions....”

ERMI License Terms

- Fair Use Clause Indicator
- Citation Requirement Details
- Display
- Digitally Copy
- Print Copy
- Scholarly Sharing
- Distance Education
- ILL Print or Fax
- ILL Secure Electronic Transmission
- ILL Electronic
- Course Reserve Print
- Course Reserve Electronic / Cached Copy
- Electronic Link Permission
- Course Pack Print
- Course Pack Electronic
- Remote Access
- Walk-in Users
- Authorized User Groups
- Authorized Locations

ODRL Permissions Model



ERMI License \neq ODRL Rights Expression

- ✓ Many similarities in function & specifics
- ✓ ODRL is extensible, non-proscriptive
- ✗ ERMI licensing needs more generic rights statements
- ✗ ERMI needs more specific rights statements
- ✗ ODRL requires explicit permission assertions (silence=prohibition)

“ODRL pictures the contracts which define the relationships as a series of checkboxes rather than a complex legal document written in somewhat creative English.”



ERMI Permission Values *via “out of the box” ODRL*

- Permitted (explicit)
- ~~Permitted (interpreted)~~
- ~~Prohibited (explicit)~~
- Prohibited (interpreted)
- ~~Silent (uninterpreted)~~
- ~~Not Applicable~~

ODRL

```
<o-ex:agreement>
  <o-ex:asset>
    <!--Title information, etc.-->
    <!--description outside ODRL scope-->
  </o-ex:asset>
  <o-ex:context>
    <!--Information about the agreement-->
  </o-ex:context>
  <o-ex:permission>
    <o-dd:display />
    <o-dd:print />
    <o-dd:lend>
      <o-ex:constraint>
        <o-dd:count>5</o-dd:count>
      </o-ex:constraint>
    </o-dd:lend>
  </o-ex:permission>
</o-ex:agreement>
```

ERMI Extensions to ODRL

```
<o-ex:agreement>
  <o-ex:permission>
    <!--explicit permissions-->
    <ermi:illprintorfax />
    <ermi:pcoursepack />
  </o-ex:permission>
  <ermi:assumed-permission>
    <o-dd:print />
    <o-dd:display />
    <ermi:scholarlysharing />
  </ermi:assumed-permission>
</o-ex:agreement>
```

What do we lose?

- ✗ Inability to distinguish prohibitions from silence leads to loss of much useful data
- ✗ “silence=denial” means extra work to identify and explicitly state all assumed permissions
- ✗ Our “assumed permissions” extensions don’t mesh with ODRL processing model
- ✗ Extensions increase validation demands
- ✗ Concern that ERMI usage may be incorrectly used to limit users' activities

What do we gain?

- ✓ Uses existing rights expression language
- ✓ Avoids creation of library-specific metadata standard
- ✓ Helps build momentum for open ODRL
- ✓ Helps bridge human license reading into actionable computing values
- ✓ Builds a crosswalk between ERM systems and DRM applications



3. Issues and Next Steps

Next Steps: XML Investigation

- Find, extend, or create a genuine *licensing* metadata exchange scheme
 - Creative Commons license via RDF

"Unlike Digital Rights Management (DRM) technology, which tries to restrict use of digital works, Creative Commons is providing ways to encourage permitted sharing and reuse of works."
- Make our other selections from the metadata salad bar. . . .

Next Steps: ERMI Project & ERM Development

- Write and publish final report (release under Creative Commons “Attribution” license?)
- Form “Interest Groups?” (LITA, ALCTS?)
- Vendor development
- Renew “standards discussion” process?
 - Should there be a (or multiple) standard?
 - What maintenance agency?
 - Develop “Resource Record” exchange testbed?

Questions and Comments

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